APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,514	09/25/2001	Aaron R. Kunze	10559-526001	3324

20985 7590 02/07/2006	EXAMINER
FISH & RICHARDSON, PC	HYUN, SOON D

FISH & RICHARDSON, PC
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*15 November 2005*</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

2.   Claims 8, 9, 11, 13, 15, 18, and 19 are rejected under 35 U.S.C. 102(e) as being

anticipated by Sawada et al (US 2002/0016858).

Regarding claim 8, Sawada et al (Sawada) discloses a method of routing a

packet for a data routing device (a router 1000 in FIG. 10) comprising:

storing information (1201, 1202, 1203 in FIG. 12) in a routing data structure (a

filtering table having routing entries 1101 in FIG. 11 and 12), wherein the information

(discard flag in 1203) indicates that a packet having a predetermined destination

address (any destination address in 1201) is to be dropped or discarded (paragraph

0123), i.e., a destination address in a destination address field in 1201

(e.g.,192.168.2.2) is a predefined non-forwarding destination address whenever the

entry has Discard Flag in 1203.

Regarding claim 9, the filtering table comprises a routing table (FIG. 12).

Regarding claim 11 Sawada further discloses that a format for the destination

address is defined by Ipv4 (paragraph 0112).

Regarding claim 13, refer to the discussion for claim 8.

Sawada discloses a method comprising providing a capability for a machine (a router 1000 in FIG. 10) to perform operations including:

comparing (paragraph 0123) the destination address of the packet with routing information (information in the entry 1201 and 1203) in a routing data structure, the routing information indicating that the packet either is to be routed or dropped (discarded); and

selectively routing the packet based on the routing information in the routing data structure, the selectively routing including dropping the packet if the destination address comprises a predetermined non-forwarding address.

Regarding claim 15, refer to the discussion for claim 11.

Regarding claim 18, refer to the discussion for claim 8.

Sawada discloses a packet routing system (FIG. 10) comprising:

memory means (a filtering table 1101 in FIG. 11 and 12) for storing a data structure comprising a destination address (1201) routing table having entries, wherein one entry (1203) contains an indication that a packet having a destination address that resolves to the one entry to be dropped;

processing means (a packet processor 1102 in FIG. 11) for receiving a packet having a destination address from a first network (FIG. 10), for checking the destination address against the destination address routing table, and for transmitting the received packet to a second network only if the received packet does not resolve to the one entry (paragraphs 1004 and 0116).

Regarding claim 19, the filtering table comprises a set of tables (1201, 1203, 1203).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5.   Claims 1-7, 10, 12, 14, 16, 17, and 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawada et al (US 2002/0016858).

Regarding claims 1, 14, and 23, refer to the discussion for claim 8. Sawada et all (Sawada) discloses a data routing apparatus (a router 1000 in FIG. 10) comprising:

a network interface (PHYS. IF 1002-1007) to receive a data packet;

a processor (a packet processor 1102 in FIG. 11) coupled with the network interface;

a routing data structure (a filtering table 1101 in FIG. 11 and 12) to store information indicating that the received data packet having a destination address (1201 in FIG. 12) is to be dropped (paragraph 0123).

However, Sawada does not explicitly teach a memory coupled with the processor (1102), the memory to instruct the processor to load the routing data structure as recited in the claims.

It would have been obvious to one having ordinary skill in the art to incorporate a memory contain a software (instructions) into the processor (1102) to implement the filtering procedure to take advantage of the using the software, and thus, the filtering table is loaded according to the instructions for determination of dropping.

Regarding claim 2, the filtering table comprises a routing table (FIG. 12).

Regarding claims 4 and 10, Sawada does not explicitly teach whether the filtering table has a pointer to one entry (Forward/Discard Flag 1203 in FIG. 12).

It would have been obvious to one having ordinary skill in the art to incorporate a pointer for the table entry to speed a searching procedure associated with entries in the table.

Regarding claim 5, Sawada further discloses that the filter table comprises a portion of an address field (1201 and 1202 in FIG. 12).

Regarding claim 6 and 25, Sawada further discloses that the filtering table comprises a network identifier (a network address) in a destination address (1201 in Fig. 12).

Regarding claims 7, 12, 16, and 22, Sawada does not teach that the filtering table comprises a deprecated directed broadcast address. It would have been obvious to one having ordinary skill in the art to enter any kind of address into the filtering table for the processor to implement the filtering.

Regarding claim 17, Sawada doe not teach that dropped packets are counted.

It would have been obvious to one having ordinary skill in the art to count the dropped packets for further management of the network, since the number of dropped packets could be a kind of statistics for system reliability and management.

Regarding claim 20, Sawada does not explicitly teach that the processor checks the destination address four bit at a time.

It would have been obvious to one having ordinary skill in the art to check the destination address four bits at a time if no unexpected results can be seen from the use of four bits at a time.

Regarding claim 21, Sawada further discloses that a format for the destination address is defined by Ipv4 (paragraph 0112).

Regarding claim 24, Sawada does not teach that the filtering table has an entry to indicate a next hop address, since the packet processor (1102) sends the packet to a packet forwarding unit (1001) for further routing.

It would have been obvious to one having ordinary skill in the art to incorporate an entry for the next hop address if the packet processor should forward the packet to an associated PHYS. IF (FIG. 10).

Sawada does not explicitly teach whether the filtering table has a pointer to one entry (Forward/Discard Flag 1203 in FIG. 12).

It would have been obvious to one having ordinary skill in the art to incorporate a pointer for the table entry to speed a searching procedure associated with entries in the table.

Sawada does not explicitly teach whether the filtering table has a value of negative one for the entry (Forward/Discard Flag 1203 in FIG. 12) to indicate the packet to be dropped.

It would have been obvious to one having ordinary skill in the art to use a value of negative one if no unexpected results can be seen from the use of the value.

Regarding claim 26, Sawada further discloses that the network identifier identifies a subnet (FIG. 13).

Regarding claim 27, Sawada further discloses that a format for the destination address is defined by Ipv4 (paragraph 0112).

Regarding claims 28 and 29, Sawada does not teach that the filtering table comprises a deprecated directed broadcast address. It would have been obvious to one having ordinary skill in the art to enter any kind of address into the filtering table for the processor to implement the filtering.

Response to Arguments

6.   Applicant's arguments filed 11/15/2005 have been fully considered but they are not persuasive.

Applicant argues (Remarks page 7, last line-page 8, line 5) that "Sawada does not drop based on a predetermined non-forwarding destination address, but rather forwards packets based on a registered destination address." Examiner disagrees. With reference to the paragraph 123, Sawada clearly teaches that a destination address in the destination address field in 1201 (e.g.,192.168.2.2) combined with the Discard Flag in 1203 must be a predefined non-forwarding destination address, because the packet having the destination address matching the entry is non-forwarded.

Applicant further argues that Sawada teaches filtering sources addresses not destination address. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., source address filtering or destination address filtering) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

7.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

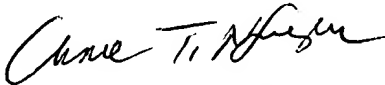than SIX MONTHS from the mailing date of this final action.

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Soon D. Hyun whose telephone number is 571-272-

3121. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chau T. Nguyen can be reached on 571-272-3126. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

S. Hyun
02/03/2006

CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600